Amendments to the Specification

Please replace the paragraph beginning on pg. 2, line 11, with the following rewritten paragraph:

Conventional catheter systems used for administering local anesthetic (otherwise referred to as "continuous nerve block systems" or "peripheral nerve catheter systems") are cumbersome and awkward to use in clinical practice. One example of a conventional peripheral nerve catheter system is described in U.S. Patent ~~5, 976,110~~ 5,976,110 and shown in **FIG. 1**. In general, conventional peripheral nerve catheter system ***100*** includes a standard epidural catheter threading assist ~~guide *110*~~ guide ***110***, which functions to stiffen an epidural catheter ***150*** so that it can puncture the hemostatic valve (not shown) incorporated within the body of a multipurpose connector ***120***. The multipurpose connector ***120*** includes a proximal end ***122*** adapted for receiving an epidural catheter ***150***, a distal end ***126*** adapted for connection to a proximal hub ***135*** of an insulated needle ***130***, and a middle aperture ***124*** adapted for fluid connection to a fluid source ***170*** via tubing ***160***. An electrically conductive stimulation wire ***140*** is coupled for applying a stimulating current to insulated needle ***130***, which is typically insulated with the exception of the tip of the needle.

Please replace the paragraph beginning on pg. 4, line 13, with the following rewritten paragraph:

FIGS. 2-5 illustrate another peripheral nerve catheter system ***200*** for administering continuous local anesthetic to peripheral nerves. In the system of **FIG. 2**, local anesthetic from fluid source ***270*** is administered through tubing ***260*** and down the long axis of ~~an~~ an insulated needle ***230***. Similar to system ***100***, system ***200*** includes an electrically conductive stimulation wire ***240*** for applying current to insulated needle ***230*** for locating a desired nerve or plexus of nerves.

Please replace the paragraph beginning on pg. 5, line 1, with the following rewritten paragraph:

FIG. 5 illustrates the process of threading epidural catheter ***250*** through epidural catheter threading assist guide ***210*** and into insulated needle ***230***. As before, movement associated with the removal of tubing ***260*** may cause the insulated needle to become misplaced. In some cases, misplacement of the insulated needle may reduce the effectiveness of the local anesthetic or may increase the time needed for correctly positioning the epidural catheter. Misplacement of the needle may even cause nerve damage by directly contacting the nerve. Thus, a major disadvantage of system ~~200~~ ***200*** results from the fact that tubing ***260*** must be disconnected from proximal hub **235** in order to connect catheter ***250***. In addition to tubing disconnections, system ***200*** requires manual insertion of thread guides (such as, e.g., catheter threading assist guide ***210***) for placing the epidural catheter within the patient. It is therefore desirable to provide a system for administering regional anesthesia without requiring disconnection of tubing (such as, e.g., tubing ***260***) or manual insertion of thread guides.

Please replace the paragraph beginning on pg. 15, line 12, with the following rewritten paragraph:

The present catheter system eliminates the above problems (and possible more) by incorporating catheter threading assist guide ***610*** into the proximal ~~hub~~***635*** hub ***635*** of the insulated needle. As will be described below, the catheter threading assist guide may be incorporated into the proximal hub in a variety of ways. In some cases, catheter threading assist guide ***610*** may be an integral component of a side port ***620***, which extends from a side surface of the proximal hub ***635***, as shown in **FIG. 6A**. Though side port ***620*** may extend from proximal hub ***635*** at substantially any angle, it may be preferred that side port ***620*** extend at an acute angle, θ, from a longitudinal axis of the catheter system. Generally speaking, the acute angle may consist of substantially any angle that prevents an epidural or peripheral nerve catheter (typically ranging in size between 18 and 21 gauge) from kinking upon insertion through side port ***620*** and into insulated needle ***630***. In some cases, the acute angle may be approximately 90 degrees from the longitudinal axis. In a preferred embodiment, the acute angle may consist of substantially any angle less than or equal to approximately 45 degrees from the longitudinal axis. By angling the side port in such a manner, the present catheter

system reduces the possibility for interfering with, or otherwise contacting, anatomical features of the patient (such as, e.g., the patient's ear, during placement of catheters in the neck region).

Please replace the paragraph beginning on pg. 16, line 27, with the following rewritten paragraph:

In some cases, tubing ***660*** may be conventional intravenous ("I.V.") tubing, such as commonly used in catheter systems. In a preferred embodiment, however, tubing ***660*** is a medical grade tubing chosen for being substantially more flexible and yielding than tubing commonly used in catheter systems. In this manner, tubing ***660*** may further reduce the possibility for interference with a patient's anatomical features, especially in embodiments in which the tubing is connected to a side port of the proximal hub (as shown in **FIGS. 8-9**). As will be ~~describe~~ described in more detail below, tubing having increased flexibility may be used to reduce such interference when coupled to an orthogonal or alternatively angled side port.

Please replace the paragraph beginning on pg. 17, line 16, with the following rewritten paragraph:

As another advantage, fingers of one hand ***680*** are able to hold system ***600*** in position so that needle ***630*** does not move from the desired location, while fingers of the other hand ***690*** are free to thread the epidural catheter ***650*** down threading assist guide ***610*** and into the tapered section of the epidural needle[[ ]]. The ability for fingers on hand ***680*** to operate flip-top cap ***615***, while maintaining the desired needle position in the subject's body further improves the safety of administering regional anesthesia with this system. [[ ]]More specifically, the process described herein for administering local anesthetic or other fluids to a desired peripheral nerve or nerve plexus (including the step of threading the epidural catheter) does not require any maneuvers, which could jeopardize correct placement of the insulated needle.

Please replace the paragraph beginning on pg. 18, line 4, with the following rewritten paragraph:

FIG. 7A illustrates another embodiment of a peripheral nerve catheter system ***700*** in accordance with the present invention. Similar to the embodiment of **FIG. 6A**, catheter system ***700*** includes an insulated epidural needle ***730***, having a proximal end ***735*** adapted for fluid

connection to a fluid source (not shown) via tubing ***760***, and having a distal end ***737*** adapted for insertion through tissue. An electrically conductive wire ***740*** may also be coupled to distal end ***737*** for supplying an electrical current to epidural needle ***730***. Catheter system ***700*** also incorporates a catheter threading assist guide ***710*** into proximal hub ***735*** of epidural needle ***730*** by forming catheter threading assist guide ***710*** as an integral component of side port ***720***. As described above, side port ***620*** may extend from a side surface of proximal hub ***735*** at an acute angle, θ, to facilitate threading of the catheter without kinking.

Please replace the paragraph beginning on pg. 18, line 16, with the following rewritten paragraph:

Unlike catheter system ***600***, however, catheter system ***700*** utilizes a rotational sealant means ***715*** to simultaneously allow passage of the catheter while preventing any reflux that may occur during administration of anesthesia fluids. For these reasons, rotational sealant means ***715*** may, in some cases, be preferred over the use of end cap ***615***. [[ ]]In general, rotational sealant means ***715*** enables the epidural catheter to be preloaded for safer and easier administration of anesthesia fluids. Rotational sealant means ***715*** will be described in more detail below in reference to **FIGS. 8-9**.

Please replace the paragraph beginning on pg. 19, line 24, with the following rewritten paragraph:

~~***FIG. 8B***~~ FIG. 8B is an exploded view illustrating exemplary components within catheter introducer ***820***. In some cases, catheter introducer ***820*** includes a cap portion ***822A***, which is in "rotational securement" with the distal end ***826*** of catheter introducer ***820***, and having a cylindrical element ***822B*** coupled therein. One end of elastic tube ***822C*** is fixedly attached (e.g., adhered) within cylindrical element ***822B***, while the other end of elastic tube ***822C*** is fixedly attached within distal end ***826***. The individual components are assembled by a ~~manufacture~~ manufacturer of the catheter system, such that no further assembly is required on the part of a user. Once assembled, elastic tube ***822C*** is arranged about a rotational axis (e.g., the longitudinal axis) of the integral catheter introducer and system. As such, a catheter (not shown) may enter an orifice at the proximal end of the catheter introducer to be threaded through cap portion ***822A***, cylindrical element ***822B***, elastic tube ***822C***, and into the proximal hub ***835*** of epidural needle ***830***.

Please replace the paragraph beginning on pg. 20, line 25, with the following rewritten paragraph:

In other cases, rotation of the cap portion ***822A*** may reduce the internal diameter ~~of~~ by an amount sufficient to form a continuous, fluid-tight seal about an outer surface of a catheter. Due to the resilient nature of elastic tube ***822C***, the integrity of the fluid-tight seal can be maintained indefinitely, if so desired. In addition, the amount of rotation needed to form the fluid-tight seal may ultimately depend on the size of catheter inserted within catheter introducer ***820***. As such, catheter introducer ***820*** is advantageously configured for maintaining the continuous, fluid-tight seal about an epidural or peripheral nerve catheter of substantially any size. The resilient nature of elastic tube ***822C*** also enables the fluid-tight seal to be maintained about the catheter before, during and after the catheter is inserted into catheter introducer ***820***. Thus, catheter introducer ***820*** enables the catheter to be preloaded without allowing fluids to leak out of catheter system ***800***.